

**Subject: PROCUREMENT OF ENGINEERING AND DESIGN SERVICES FOR THE  
ADVANCED COMPOUND SEMICONDUCTOR LABORATORY/MICROELECTRONICS  
INTEGRATION FACILITY (CSL-MIF) AT HANSCOM AIR FORCE BASE (HAFB),  
BEDFORD, MASSACHUSETTS**

**General Information:**

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POC: Alysha Macdonald, 978-318-8715

**1. CONTRACT INFORMATION:** The U.S. Army Corps of Engineers - New England District (CENAE) plans to award a project-specific contract for professional architectural, engineering, and design services, procured in accordance with the Brooks Act as implemented in FAR Subpart 36.6. Firms will be selected for negotiation based on demonstrated competence and qualifications for the required work. Design phase A-E services may include, but are not limited to, the following: preparation of design documents for a design-bid-build procurement that include plans, specifications, design analysis, and construction cost estimates and schedules at the concept (15%), schematic (35%), design development (65%), draft construction document (95%) and final construction document (100%) levels; plus: site investigation, program validation, planning, survey, geotechnical analysis, utility and infrastructure assessments, computer modeling, developing renderings, value engineering, construction phasing and scheduling analysis; and other engineering and construction phase services for the subject project. Construction and Solicitation phase A-E services may include, but are not limited to, the following: shop drawing and construction submittal reviews, commissioning and documentation support, site visits and field support, responses to requests for information, preparation and review of operation and maintenance manuals, and general technical assistance. Other A-E services for the subject project may include, but not be limited to, the following: commissioning design and support, startup services, and general engineering and architectural support. One firm-fixed-price contract will be awarded.

This announcement is open to all businesses regardless of size. If the selected firm is a large business concern, the firm must comply with FAR 52.219-9, Small Business Subcontracting Plan, and submit a small business subcontracting plan with the final price proposal. The firm must submit a Small Business Subcontracting Plan that will contain small business goals for all of the Small Business Programs. The subcontracting plan must be reasonable, attainable and challenging. The North American Industry Classification System (NAICS) Code to be used for this procurement is 541330. Award of the contract to the selected firm is anticipated in September 2017. Design is scheduled to be completed by March 2019 with Construction Phase Services being provided through approximately March 2022.

**2. PROJECT INFORMATION:**

Massachusetts Institute of Technology Lincoln Laboratory (MIT LL) is a Federally Funded Research and Development Center (FFRDC) chartered to apply advanced technology to problems of national security. The Advanced CSL-MIF building is a Military Construction-Air Force (MCAF) project, funded through the Air Force Civil Engineer Center (AFCEC), that is currently programmed for construction in Fiscal Year 2019. The Advanced CSL-MIF consists of approximately 161,000 gross square feet (GSF) of new laboratory and office space which includes a Clean Room complex for use by the Advanced Technologies Division of MIT LL. See DD Form 1391 for the project (attached) dated 6 Jan 2016 for more information on the project. The intent of the CSL is to consolidate MIT LL's existing compound semiconductor materials growth, fabrication and characterization facilities to enable multi-wavelength sources, large format multi-wavelength detector arrays, radio frequency electronics, high-power electronics, and integrated photonics. The intent of the MIF is to consolidate and enhance MIT LL's facilities for the fabrication and packaging of specialized advanced electronic prototypes.

The Advanced CSL-MIF is to be located on an existing paved parking lot that contains a cluster of trees in the center and is surrounded by other structures. The site slopes from south to north with a change in grade of approximately 28 feet. The building is anticipated to be three stories, and constructed using concrete foundations, steel or reinforced concrete superstructure, and energy efficient roofing. The new building will be connected to other MIT LL buildings via a pedestrian connector bridge as part of this project. Specialized construction requirements include large and sophisticated clean rooms for microprocessor development and experimentation. (The total cleanroom area under filter is approximately 35,000 net square feet, designed to Federal Standard (FED STD) 209E Class 10/International Organization for Standardization (ISO) Class 4 standards); associated complex HVAC and electrical requirements; secure communications areas; hazardous, toxic, and corrosive process liquid and gas storage, transport, distribution and associated waste collection systems; and a structural and foundation system that minimizes vibrations and noise in the lab space. The facility will be designed to meet Institute of Environmental Sciences and Technology (IEST) standards for vibration control (VC) to VC-C/D with select portions to VC-E. The proposed location for the new Advanced CSL-MIF is presently a parking lot on a constricted site. Site improvements will include demolition of 4 buildings, expansion of the main chiller plant, provision of a new feed from the main electrical distribution plant, access roads, replacement parking, relocation of existing utilities and new utility connections, landscaping, and all other work necessary to make this a complete and usable facility. Facilities will be designed as permanent construction in accordance with the Department of Defense (DoD) Unified Facilities Criteria (UFC) 1-200-01, General Building Requirements. This project will comply with DoD antiterrorism/force protection requirements per UFC 4-010-01, sustainability principles in accordance with UFC 1-200-02, and, High Performance and Sustainable Building Requirements including meeting USGBC sustainability standards for LEED-Silver.

The project includes design services for architecture, landscape architecture, vibration control, interior design, civil/site engineering, structural engineering, geotechnical engineering, mechanical engineering, electrical engineering, and acoustical engineering; and the design for management of hazardous, toxic, and corrosive process liquid and gas, communication, fire protection, process controls, redundant power and information systems, and access control and building security systems. Note that detailed layout for laboratory equipment for this project is intended to be done by others. This project is on a secure DoD installation and involves sensitive

information; all members of the A-E's team who will work on this project must be U.S. citizens and are subject to a background check.

Engineering and architectural products shall be produced to Corps of Engineers guidelines and specific formats and to applicable Air Force standards. Construction cost estimates shall be prepared using the latest version of the U.S. Army Corps of Engineers' Micro-Computer Aided Cost Engineering System (M-CACES) system, M II (cost engineering software as provided by the Government and licensed to the firm). Specifications shall be produced using Uniform Facilities Guide Specifications through the use of the specification software (SPECSINTACT). Use of Building Information Modeling (BIM) for drawing production is mandatory. All BIM models shall be developed using Autodesk Revit 2016. Primavera P6 shall be used for developing detailed construction schedules and MS Project for more basic design and constructions schedules. ProjNet (DrChecks) (<https://www.projnet.org>) shall be used for comment resolution of design review submittals.

3. **SELECTION CRITERIA:** The selection criteria are listed below. Factors are listed in descending order of importance (first by major criterion and then by each sub-criterion). Criteria (a) through (f) are primary factors. Criteria (g), (h) & (i) are secondary factors and will only be used as "tie-breakers" among firms that are essentially technically equal.

- (a) Specialized Experience and Technical Competence.** Firms must demonstrate Specialized Experience and Technical Competence in: (1) design of micro-electronics facilities consisting of laboratory and office space comparable in size and scope to this project (2) design of facilities that minimize vibration to VC-C/D standards or better; (3) the design of 'clean rooms' that meet or exceed FED STD 209E Class 10/ISO Class 4 standards; (4) design of systems to store, distribute and manage hazardous, toxic, and corrosive process liquid and gas in facilities comparable to this project; (5) design of vertical construction projects to meet federal and UFC standards and criteria; (6) design of buildings on congested sites requiring complex phasing for utility work; (7) use of MII, SPECSINTACT, and Revit. Information contained in the SF 330 Part I, Section F will be the primary basis for evaluation against this criteria. Projects in which the firm's work was completed prior to 2007 will be given less consideration.
- (b) Professional Qualifications.** The evaluation of Professional Qualifications will consider education, training, professional registration/licensure, certifications, and relevant experience of specified personnel performing the role to be used on the project, and longevity with the firm. (1) Resumes are required for the following key personnel.  
Key Personnel: project manager (engineer or architect), architect, code compliance/life safety specialist (architect or engineer), laboratory design specialist (architect or engineer; registration not required), structural engineer, mechanical (HVAC) engineer, mechanical (plumbing) engineer, vibration control design specialist (registration not required), electrical engineer, fire protection engineer, process control engineer, civil engineer, and construction cost estimator (registration not required). The lead architect or engineer assigned to the project in each of the previously listed disciplines must be registered to practice in the appropriate professional field unless otherwise noted. (2) Resumes for the following disciplines are also requested for evaluation: program manager or principal, interior designer, security analyses and design engineer, commissioning, construction scheduler, geotechnical engineer, and licensed land surveyor (registered in Massachusetts). Project manager shall

have 10 years of experience managing projects and a minimum of 3 years as a project manager on work that is similar in nature and scope as work required for this project. Firms must acknowledge their understanding that any employees from their team who will be working on the project must be a U.S. citizen and are subject to a background check.

- (c) **Work Management:** A proposed management plan shall be presented that references the organization chart provided in Part I, Section D of the SF 330, and briefly addresses the designer's management and philosophical approach for executing this project including: team organization, quality control procedures, cost control, coordination of in-house disciplines and consultants, and prior experience of the prime firm and any of their significant consultants on similar projects. The SF 330 shall clearly indicate the primary office where the work will be performed and the staffing at this office.
- (d) **Past Performance.** The firm must possess a good record of past performance on contracts with respect to quality of work, cost control, compliance with performance schedules, ability to manage subcontractors, and positive references from customers as determined by information pulled from the Past Performance Information Retrieval System (PPIRS) and other sources.
- (e) **Capacity.** The firm must demonstrate the capacity to execute the full value of the contract for the anticipated performance period. A firm shall be evaluated on the available capacity of key personnel from the prime firm and its team.
- (f) **Knowledge of the locality of the project** including geologic and subsurface features, environmental conditions, climatic conditions, local construction methods, and permit requirements.
- (g) **Geographic Proximity.** Location of the firm's office(s) as well as those of their team in the general geographical area of the project.
- (h) **Extent of Participation of Small Business (SB) and Small Disabled Business (SDB) concerns.** Firms shall identify their small business team members and indicate their commitment to utilize SBs and SDBs to include Woman-Owned Small Business (WOSB), HUBZone Small Business, Service-Disabled Veteran-Owned Small Business (SDVOSB) and Veteran-Owned Small Business (VOSB). Use of historically black college and university and minority institutions (HBCU/MI's) is also encouraged. Extent of use will be measured as a percentage of the total anticipated contract effort, regardless of whether the small business concern is a prime contractor, sub-contractor, or joint venture partner; the greater the participation, the greater the consideration.
- (i) **Volume of DoD A-E Contract Awards.** Firms shall indicate the volume of DoD A-E contracts awarded to the prime in the last 12 months. The information will be verified and updated during the interviews with the most highly qualified firms. The equitable distribution of DoD A-E contracts among firms, including Small Business concerns, will be considered.

4. **SELECTION PROCESS:** If there are a large number of interested firms, a Pre-selection Board may be utilized. The Pre-selection Board, if used, will review and evaluate the SF 330s and send a list of the highly qualified firms to the Selection Board for further evaluation. Evaluation of the SF 330s may be supported by a non-Government advisor employed directly by MIT LL, an FFRDC. As part of the interview phase, the firms considered most highly qualified will be given information from the project's Basis of Design developed previously for the project along with some questions as to their approach to managing specific design challenges and other questions. The A-E firm will be requested to provide an in-person presentation at the U.S Army Corps of Engineers, New England District headquarters in Concord, MA of up to 45 minutes in

length using PowerPoint slides that address the questions, along with an overview of their management and technical approach for executing the design of the CSL-MIF. Time will then be allotted for questions from the selection board. No architectural/design materials are being solicited for this presentation. Stipends will not be provided. Final ranking of the most highly qualified firms will then be made by the Selection Board based upon all information provided. Upon selection, a Request for Proposal will be issued to the selected firm with a detailed scope of work for negotiation and award of a firm-fixed-price contract.

**5. SUBMISSION REQUIREMENTS:** Interested firms able to perform this work must submit Parts I and II of the SF 330 for the prime firm (or joint venture). Part II of the SF 330 must also be submitted for each consultant and if a joint venture, for the joint venture entity. Please note that a separate Part II is required for each branch office of the prime firm and any subcontractors that will have a key role in the proposed contract. If a joint venture is being utilized, a copy of the joint venture agreement is to be included in Part II. Submissions must be made to: U.S. Army Corps of Engineers, New England District, 696 Virginia Road, Concord, MA 01742-2751, ATTN: Contracts Branch, Alysha MacDonald not later than the close of business on April 19, 2017. Facsimile or e-mail transmissions will not be accepted. Include the firm's DUNS number on the SF 330, Part I, Section B. On the SF 330, Part I, Section C, provide the DUNS number for each consultant. On the SF 330, Part I, Section D, the Organizational Chart may be submitted on 11" x 17" paper (single sided) if necessary. On the SF 330, Part I, Section F, example projects (10 maximum) shall be listed in order of relevance to the type of work anticipated to be performed under this contract; one supplemental page (up to 11" x 17", single-sided) may be provided to present photos and/or plans from each project. In the SF 330, Part I, Section F, Box 24, provide the following information for each project: month/year the firm's work started and completed; total contract value of the work performed by the firm and any team subcontractors to be used on this project; physical size of the designed facility (gross square footage and acreage); and construction cost (cost range requested if specific amount cannot be provided). If the sample project is a federal procurement, include the contract number for which the A-E firm performed. In the SF 330, Part I, Section H, provide the firm's proposed work management approach for this contract including estimated percentage of involvement of each firm on the proposed team and the firm's approach for ensuring the quality of work performed by its subcontractors – see also SELECTION CRITERIA, item (c). In the SF 330, Part I, Section H, the A-E firm may also provide supplemental information to address all aspects for which Specialized Experience and Technical Competence is being sought as well as documentation to support past performance selection criteria. Copies of applicable certificates and/or awards may also be provided.

Please submit three bound hard copies, one unbound hard copy, and one electronic copy of all submissions. (CD or DVD only. No USB flash drives can be accepted.) The SF 330, Part I, shall have a page limit of 100 pages. A page is one side of a sheet; 11" x 17" (single sided) counts as two pages. Font size shall not be less than 10 font and the margins for pages that supplement the SF 330 forms shall not be less than one inch. Pages in excess of the page limit will not be evaluated. All contractors must be registered in the System for Award Management (SAM) to be considered for award. Information regarding registration can be obtained online at [www.sam.gov/potrtal/public/SAM/](http://www.sam.gov/potrtal/public/SAM/) or by telephone at 1-866-606-8220.

For any general or administrative questions, contact the contract specialist, Alysha MacDonald,

at 978-318-8715 or via email at [Alysha.Macdonald@usace.army.mil](mailto:Alysha.Macdonald@usace.army.mil). Solicitation packages are not provided. This is not a request for proposal. Personal visits for the purpose of discussing this announcement prior to the closing date of this announcement will not be entertained or scheduled. However, questions may be directed to the point of contact for this announcement.